

(c) each of said at least one communicating pair engages in a communication exclusively over said electrically-conducting media; and

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Cont.
(d) each of said at least one communicating pair is operative to engage in said communication bidirectionally and independently of the communication of any other of said at least one communicating pair;

the local area network functioning as a multiplexer, wherein at least one of said plurality of serial intelligent cells is connected to a high data rate connection whose bandwidth is multiplexed to at least one other of said plurality of serial intelligent cells.

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55. (New) The local area network as in claim ¹~~54~~, functioning as a voice multiplexer, wherein at least one of said plurality of serial intelligent cells is connected to a telephone.

REMARKS

Reconsideration of the above-identified patent application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-34 are in this case. Claims 1-3, 12-14, 19, 21, 28 and 31 have been rejected under § 102(b). Claims 29 and 30 have been rejected under § 103(a). Claims 4-11, 15-18, 20, 22-27 and 32-34 have been objected to. Dependent claim 4 has been canceled. Independent claim 1 has been amended. New independent claims 35, 36, 38-40, 42-44, 46, 47 and 52-54 and new dependent claims 37, 41, 45, 48-51 and 55 have been added.

The claims before the Examiner are directed toward a local area network based on serial intelligent cells (SICs) that are connected in a pairwise manner only by electrically-conducting media to form communicating pairs. The two SICs of each pair communicate with each other, bidirectionally and independent of any other pair, exclusively via the respective electrically-conducting media. In various embodiments, the electrically-conducting media include electrical power wiring or telephone wiring of a building; at least one of the media is used for both data exchange and either electrical power delivery, analog telephony or digital telephony; at least one of the SICs is powered from an electrical power main, from a dedicated power line, or from the electrically-conducting media of its respective pair, or can itself deliver electrical power; or at least one of the pairs is partly housed within an electrical outlet. In other embodiments, one of the SICs includes a sensor or an actuator; one of the SICs is connected to a public telephone network interface; or the local area network functions as a multiplexer.

§ 102(b) Rejections - Sambamurthy et al. '114

The Examiner has rejected claims 1-3, 12-14, 19, 21, 28 and 31 under § 102(b) as being anticipated by Sambamurthy et al., U. S. Patent No. 5,311,114 (henceforth, "Sambamurthy et al. '114"). The Examiner's rejection is respectfully traversed.

As noted below, the Examiner has objected to claim 4 as being dependent on rejected base claim 1. The Examiner has indicated that claim 4 would be allowable if rewritten in independent form including all the limitations of claim 1. Claim 1 now has been amended to include the limitations of claim 4. Correspondingly, claim 4 has been canceled. The support for this amendment in the specification is identical to the support therein for claims 1 and 4 as filed.

With independent claim 1 allowable in its present form, it follows that claims 2, 3, 12-14, 19, 21, 28 and 31, which depend therefrom, also are allowable in their present form.

§ 103(a) Rejections - Sambamurthy et al. '114 in view of Carmi '593

The Examiner has rejected claims 29 and 30 under § 103(a) as being unpatentable over Sambamurthy '114 in view of Carmi, U. S. Patent No. 5,311,593. The Examiner's rejection is respectfully traversed.

It is demonstrated above that independent claim 1 is allowable in its present form. It follows that claims 29 and 30, which depend therefrom, also are allowable in their present form.

Objections

The Examiner has objected to claims 4-11, 15-18, 20, 22-27 and 32-34 as being based on rejected base claims. The Examiner has noted that claims 4-11, 15-18, 20, 22-27 and 32-34 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

As noted above, claim 1 has been amended to include the limitations of claim 4.

With regard to the remaining claims, new claims 35-55 are claims 5-11, 15-18, 20, 22-27 and 32-34 rewritten in independent form. The following table shows the correspondences between the claims as filed and the new claims.

Claims as filed	New claims
5	35
6	36
7	37
8	38
9	39
10	40
11	41
15	42
16	43
17	44
18	45
20	46
22	47
23	48
24	49
25	50
26	51
27	52
32	53
33	54
34	55

The support in the specification for the new claims is identical to the support therein for the respective old claims.

Other Amendments to the Claims

To emphasize the fact that the restriction, recited in claim 1(d), that each communicating pair communicates bidirectionally and independently of the other communicating pairs, is not an obligatory restriction within the scope of the present invention, but is rather a required functional capability of the communicating pairs, claim 1(d) has been amended to state that each communicating pair is operative to engage in communication bidirectionally and independently of any other communicating pair.

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Support for this amendment is found, *inter alia*, in the description, on page 17 line 10 through page 18 line 5, of the difference between the prior art Token Ring topology and the circular topology of the present invention as illustrated in Figure 8. In particular, page 17 lines 16-19 states

Hence, a first SIC can communicate with a second SIC using one type of frame structure and protocol, while the same first SIC can communicate with a third SIC using a different type of frame protocol. (emphasis added)

and page 17 lines 22-25 states:

The SIC network according to the present invention, however, does not impose any limitation on the data flow in any of the communication links. Full duplex, half duplex or unidirectional communication is possible, and can even vary from link to link throughout the network. (emphasis added)

Thus, for example, a user of the present invention is free to configure the SICs of Figure 8 to communicate unidirectionally with a common frame protocol, thereby emulating a prior art Token Ring, although such a configuration normally would not be preferred.

Parts (d) of new independent claims 35, 36, 38-40, 42-44, 46, 47 and 52-54 have been phrased in conformity with this amendment to claim 1(d).

Amendments to the Specification

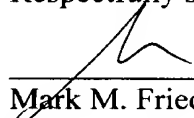
Inadvertent typographical errors on page 3 line 11, page 5 line 3 and page 5 line 11 have been corrected.

On page 10, the description of Figure 6 has been moved after the description of Figure 5.

No new matter has been added.

In view of the above amendments and remarks it is respectfully submitted that independent claims 1, 35, 36, 38-40, 42-44, 46, 47 and 52-54, and hence dependent claims 2, 3, 5-34, 37, 41, 45, 48-51 and 55 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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